REMARKS/ARGUMENTS

The October 22, 2002 Office Action has rejected all pending claims under 35 U.S.C. § 101, § 112 and § 102. In light of the amendments above and the arguments below, Applicants respectfully request reconsideration.

§ 101 Rejection

The Examiner has rejected all pending claims pursuant to 35 USC § 101. The Applicant respectfully traverses. The invention described in this application relates to the "discovery" of a "new and useful composition of matter," which in this case is an isolated proton-gated ion channel. While this channel is found in nature, to the knowledge of the inventors it was not disclosed by anyone prior to the date of the priority application that relates to the present application. The utility of such a channel resides in, among other applications, its use in a assay to screen for ligands. Applicants have amended claim 16 to emphasize that the proton-gated cation channel is "isolated." Consequently, the ion channel that is the subject of this application does in fact meet the requirements of 35 U.S.C. § 101.

§ 112 Rejections

The Examiner has also rejected all pending claims pursuant to 35 U.S.C. § 112, first and second paragraphs. The

Applicant has corrected the apparent difficulty by specifying that the amino sequence is that of SEQ ID NO:2 rather than SEQ ID NO:1. As the Examiner has indicated, SEQ ID NO:1 relates to a nucleic acid sequence rather than an amino acid sequence.

§ 102 Rejection

Applicants note that they have amended claim 16 to remove the "variant of that sequence having at least 85% identity therewith."

The Examiner has further rejected pending claims 16-21 pursuant to 35 U.S.C. § 102(a) as being anticipated by Waldman (J. Biol. Chem., 1997). Applicants note that they have supplied the Declaration of Kazimierz Babinski and Philippe Seguela to provide the Examiner with some information concerning the Waldman reference and the Lewis, et al. reference (discussed below).

In their Declaration, the inventors explain that Waldman describes the cloning in COS cells of a novel proton-gated Na^+ channel subunit expressed in Dorsal Rat Ganglia (DRG) and identified as DRASIC (Rat Dorsal Root Ganglion Acid Sensitive Ion Channel). As the inventors disclose in the attached Declaration, while there are apparent similarities between DRASIC and the proton-gated ion channel that is the subject of the present application, it should be noted that there are

fundamental differences between them as well. As indicated at page 3 of the specification, hASIC3 is not the ortholog of rat DRASIC, and evidence for this is presented below this statement in the specification.

Based on this information, the inventors assert that what they have discovered is a novel proton-gated ion channel that has no counterpart in other species. Consequently, it is respectfully submitted that the Waldman reference does not anticipate the present claims.

The Examiner has additionally rejected all pending claims pursuant to 35 U.S.C. § 102(e) as being anticipated by DeWeille, et al. (US Patent No. 6,287,859, hereinafter "the '859 Patent"). In this regard, the Applicant wishes to assert its priority over the subject matter that is described in this application. Applicants' application is based on Canadian Patent Application No. 2,219,713 which was filed on October 29, 1997 (now abandoned). (Applicants have enclosed a copy of this priority document.) The priority date that is established by this first application pre-dates the priority dates that are indicated in the '859 Patent. (The earliest date that would appear to be relevant in respect of the '859 Patent is February 11, 1998.) Applicants note that a nucleic acid molecule of the present invention is disclosed which

would "encode a peptide consisting essentially of the amino acid sequence depicted in Figs. 1A and 1B." (Page 2, lines 14-15)

Finally, the Examiner has rejected all pending claims pursuant to 35 U.S.C. § 102(a) as being anticipated by Lewis, et al. (Nature, 1995). As was the case with the Waldman reference (discussed above), the Lewis reference relates to the identification and characterization of a novel heteropolymeric P2X channel comprised of $P2X_2$ and $P2X_3$ subunits and present in rat dorsal root ganglia (DRG). Despite the similarities between the ion channel described in the Lewis reference and that which is the subject of the present application, the Applicant wishes to assert that they are two distinct gene families. Applicants further characterize the difference in their Declaration. For these reasons, the Applicant respectfully submits that the Lewis reference does not anticipate the present invention.

In view of the amendments to the claims and the present response, the Applicant believes that it has addressed all of the Examiner's objections in relation to this application. Favorable reconsideration is therefore earnestly requested.

A Petition and Fee for Three Months Extension of Time is enclosed. If further fees are necessary, please charge Deposit Account 17-0055.

Respectfully submitted,

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